Characterization of the chemical markers of the extract from *Momordica charantia* L.

Medeiros, W.R.D.B.¹; Queiroz, E. C. ¹; Zucolotto, S. M.¹; Moura, T. F.¹

¹UFRN - Federal University of Rio Grande do Norte

**Introduction:** *Momordica charantia* L. (Cucurbitaceae), known popularly as “Melão de São Caetano”, is used in popular medicine as anti-inflammatory and hypoglycemic. Additionally, it was included in RENISUS (Relação Nacional de Plantas Medicinais de Interesse para o SUS). However, there are few studies on the chemical constitution of this species in Brazil. This study aimed to characterize the chemical markers of *M. charantia* to contribute to the quality control.

**Experimental part:** The extract was obtained by maceration hydroethanolic 70% of leaves and stems. It was performed partition with petroleum ether (PE), CHCl₃, AcOEt and n-butanol. The selected fraction was submitted to flash column in gradient system: PE (100%); PE: CHCl₃ (50:50); CHCl₃ (100%); and CHCl₃: MeOH (90:10 up to 100%). The selected sub-fraction was subjected to purification by column chromatography (CC). It were performed 4 CC on silica gel (Merck 0,063-0,200). Each step was monitored by TLC on silica gel 60 F254 and vanillin sulfuric and Natural Reagent A 0,5% as detector. **Results:** CHCl₃ fraction showed the larger yield (2.64 g) and showed a chromatographic profile complex. In preliminary purification by flash column yielded 9 sub-fractions (A1-I1). D1 (1.4 g) was chromatographed on silica gel column (175 g) (CHCl₃: MeOH gradient 5,5:0,5 up to 0:1) to yield 20 sub-fractions (A2 – L2). E2 (211 mg) was selected to CC on silica gel (24 g) column (CHCl₃: MeOH: NH₄OH 5,2:0,5:0,1) to yield 7 sub-fractions (A3 – G3). B3 (167 mg) was subjected to CC on silica gel (28 g) (AcOEt: MeOH: NH₄OH 5,3:0,3:0,4), resulting in 25 sub-fractions (A4 – Z4). The results obtained higher purity were G4 (14, 8 mg), H4 (18,1 mg) and S4 (3,2 mg). G4 and H4 present bands blue/violet after development with vanillin sulfuric suggesting the presence of cucurbitacines and/or triterpenes according described in the literature for the species. This sub-fractions are being analysed by LC-MS to molecular ion (M⁺) peak. **Conclusion:** The semi-purified fractions obtained seems be cucurbitacines and triterpenes, however it is necessary to purify and identify these compounds that can be used as chemical markers of *M. charantia* L.